

Silicon NPN Power Transistors

2N4864

**DESCRIPTION**

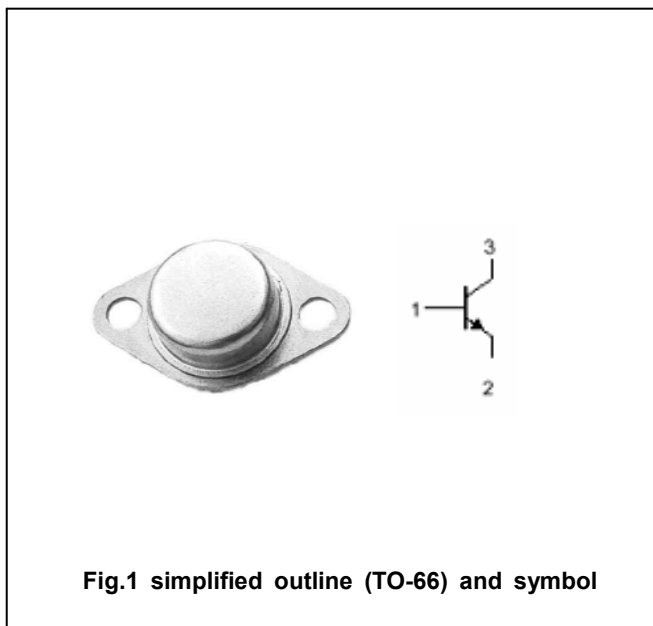
- With TO-66 package
- Continuous collector current- $I_C=2A$
- High  $V_{CEO}:120V$  (Min)

**APPLICATIONS**

- For use in general-purpose switching and linear amplifier applications

**PINNING (See Fig.2)**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector



**ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ C$ )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	140	V
$V_{CEO}$	Collector-emitter voltage	Open base	120	V
$V_{EBO}$	Emitter-base voltage	Open collector	7	V
$I_C$	Collector current		2	A
$P_T$	Total power dissipation	$T_C=25^\circ C$	16	W
$T_j$	Junction temperature		150	$^\circ C$
$T_{stg}$	Storage temperature		-65~200	$^\circ C$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{(th)jc}$	Thermal resistance junction to case	7.0	$^\circ C/W$

## Silicon NPN Power Transistors

2N4864

## CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =0.1 A ; I <sub>B</sub> =0	120			V
V <sub>CE(sat)</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =2A; I <sub>B</sub> =0.4A			1.5	V
V <sub>BE(sat)</sub>	Base-emitter saturation voltage	I <sub>C</sub> =2A; I <sub>B</sub> =0.4A			2.0	V
V <sub>BE(on)</sub>	Base -emitter on voltage	I <sub>C</sub> =0.5A ; V <sub>CE</sub> =5V			1.5	V
I <sub>CEX</sub>	Collector cut-off current	V <sub>CE</sub> =140V; V <sub>BE(off)</sub> =1.5V T <sub>C</sub> =150°C			2.0 5.0	mA
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =120V; I <sub>B</sub> =0			10	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =7V; I <sub>C</sub> =0			1.0	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =0.5A ; V <sub>CE</sub> =5V	50		150	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =2A ; V <sub>CE</sub> =5V	10			
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =10V; f=1MHz		50		pF
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.5A ; V <sub>CE</sub> =5V		50		MHz

Silicon NPN Power Transistors

2N4864

PACKAGE OUTLINE



Fig.2 Outline dimensions